

II. Amendments to the Drawings

Applicant has complied with all of the Examiner's requirements with respect to the drawings by submitting four new sheets of corrected drawings. These four sheets of corrected drawings are appended to this document. Accordingly, the notation "(Prior Art)" has been added to the Figures 2, 3, 4, and 15. And in Figure 17, step 1710, the phrase "EXTENEING ROM" has been corrected to read: "EXTENDING FROM".

However, applicants have corrected Figures 2, 3, 4, and 15 only to comply fully with the requirements of the Examiner and to make this a fully responsive amendment.

Applicants respectfully request that the Examiner reconsider his requirement that the notation "(Prior Art)" be added to the Figures 2, 3, 4, and 15. With all due respect, applicants disagree with and traverse this requirement, as is explained more fully in the "REMARKS" portion of this amendment. Briefly summarized, Figures 2, 3, 4, and 15 do not purport to be representations of the prior art. Rather, they simply present exemplary data sets which are discussed not just in the "Background" portion of the specification but also in the "Detailed Description" portion of the specification as well. As such, they are not truly representations of prior art methods and systems for selecting program patches.

III. REMARKS

This amendment and reply is submitted in response to a "Non-Final" Office Action (mailed on December 10, 2005). Applicants respectfully request that the examination of this application proceed with respect to the claims as amended. Four corrected sheets of drawings have been submitted, as was required by the Examiner. However, applicants respectfully request reconsideration of the requirement for the submission of the three drawing sheets encompassing corrections to Figures 2, 3, 4, and 15, as is explained fully below.

A. Priority

Applicants agree with the Examiner's determination that the claims presented for examination in this application, and as amended by this amendment, are not entitled to the priority date of the parent application 09/924,773 filed August 8, 2001. The priority date with respect to the present set of claims is this application's actual filing date, February 15, 2002. Applicants reserve their legal right to claim the earlier priority date for amended versions of the present claims or for claims added in the future or presented in future continuations or divisions or continuations-in-part of the present application.

A. Corrections Made to the Drawings

The Examiner has objected to Figures 2, 3, 4, 15, and 17 of the drawings. In order to make this a complete response, applicants have prepared and submitted four newly-prepared sheets of drawings which fully comply with the Examiner's requirements as to the drawings. These four sheets are attached to the very end of this document.

With respect to Figure 17, applicants agree with the Examiner that correction is needed and thank the Examiner for having drawn this matter to applicants' attention. Accordingly, in step 1710 of Figure 17, the phrase "EXTENEING ROM" has been corrected to "EXTENDING FROM".

With respect to the Figures 2, 3, 4, and 15, the corrected drawing sheets have been modified as the Examiner has required by the addition of "(Prior Art)" to each of these

figures, with this language positioned to the right of the figure numbers on the three sheets bearing these four figures.

With all due respect, applicants ask that the Examiner reconsider his requirement that “(Prior Art)” be added to these sheets of drawings for the following reasons:

The invention, characterized generally, resides in automated methods for selecting program patches as well as in systems for carrying out such methods. Accordingly, the “prior art” would be method steps or systems capable of carrying out such methods. But the Figures 2, 3, 4, and 15 do not disclose any methods or systems. Figures 2, 3, and 4 present only illustrative patch-related database structures, and Figure 15 presents an illustrative set of patch trees which also form an illustrative patch database structure. Since these Figures do not depict patch selection methods or systems capable of carrying out such methods, they do not depict any “prior art” methods of patch selection and evaluation.

Additionally, these illustrative data structures are not just discussed in the “Background of the Invention” portion of the specification, contrary to what the Examiner has indicated. For example, the data structure labeled “Patch_5” which appears in all of the Figures 2, 3, and 4, is discussed in the detailed description portion of the specification in paragraphs [0032] and [0038]. And the reference numbers appearing in Figure 15 are discussed and referenced in the detailed description portion of the specification in the paragraphs [0064], [0066], and [0068]. For example, paragraph [0034] of the Detailed Description reads in relevant part as follows:

[0034] In some situations, as illustrated in Fig. 11 at 1100 and also in Fig. 4 at 400, two or more patches will be replaced by a single patch. Thus, PATCH_6 SUPERSEDES both the patches PATCH_5 and PATCH_8. This is represented in the search tree by PATCH_6 forming the root of a sub-tree having the two branches PATCH_5 and PATCH_8.

Paragraph [0064] of the Detailed Description reads in relevant part as follows:

[0064] Figs. 15 and 16 illustrate the use of the invention to select patches from a set of patch trees 1500 that are shown in Fig. 15. Five patch trees 1502, 1504, 1506, 1508, and 1510 are shown in Fig. 15.

Accordingly, applicants respectfully request that the Examiner not replace the sheets containing Figures 2, 3, 4, and 15 and filed with this application with the newly-submitted sheets. And if the Examiner does add these replacement sheets to the application, applicants respectfully traverse this action and do not agree that these figures in any way depict any “prior art” relevant to the present invention. Reconsideration of this requirement is respectfully requested for the reasons stated.

A. Objection to Claims 12 and 26 for Informalities

Applicants thank the Examiner for having pointed out the need to add the word “a” to both of these claims. These corrections have been entered.

B. Rejection of Claims Based Upon 35 U.S.C. §112

Applicants thank the Examiner for the care with which he has reviewed the claim language for formal defects. The Examiner’s objections are discussed individually below

1. Indefiniteness

a. Improper use of “may be”

The Examiner indicates that claims 6, 9, 12, 20, and 23 are “Indefinite” because they each recite the limitation “wherein patch visibility **may be** at least ‘all’ or ‘limited’ or their equivalents.” The Examiner objects to this permissive language and this use of the phrase “may be.” Accordingly, applicants have amended claims 6, 9, 20, and 23 to correct this. For example, claim 6 now reads, in relevant part:

6. ... wherein patch visibility is either “all” or “limited” or their equivalents.

Reconsideration of this grounds for rejection is respectfully requested with respect to claim 12, since claim 12 does not contain the phrase “may be”.

b. “limited” and “all” Unclear

The Examiner indicates that claims 6, 7, 9, 10, 20, 21, 23, and 24 recite the limitation “limited.” The Examiner states that it is “unclear as to which degree is the limitation

visibility ... considered limited.” Applicants respectfully request reconsideration of this grounds for rejection in view of the following explanation:

The terms “all” and “limited,” as here used in the claim, is defined in the specification as follows:

In addition to the patch reliability rating, shown in parenthesis in Figs. 4, 13, 14, and 15 and discussed fully above, two other factors may be assigned to each patch to improve and to add flexibility to the patch selection process.

The first additional factor is patch visibility -- whether a patch is visible to "All" users, to a "Limited" number of users, or to "None." The README file that accompanies a patch with a visibility of "None" cannot be found and cannot be searched by users searching for patches, and thus these patches are entirely out of service and are not even visible. The README file that accompanies a patch with a visibility of "Limited" can only be viewed and searched by specially empowered users. Accordingly, patches whose visibility is limited simply do not exist insofar as other non-empowered users are concerned -- such users cannot even search the patch properties to see what defects they cure, since searches of all the patch README files skip over the README files for such patches.

By way of brief further explanation, a patch with a visibility of “Limited” will normally be “visible” only to “internal users” – a program vendor’s internal patch experts:

[000110] An “internal user” is considered to be an internal patch expert, locating patches on behalf of an external client. The internal patch expert is allowed to search and view patches which have “Limited” visibility or availability. ... The list of patches which such an “internal user” is permitted to view may also differ from an external user’s view as a result of the internal user’s expanded authorizations. It is thus possible to define a wide variety of real and automated “users” of the system that are assigned different combinations of rating, visibility and availability values.

Outside field engineers and enterprise managers would be permitted to view more widely installed and tested patches having a visibility attribute of “All:”

[000109] An "external user" is considered to be a system administrator representing a particular company. The external user will be able to view and search for patches which have a visibility attribute of "All" and may download those patches which have an availability attribute of "All." When presenting representative patches from located patch trees to this type of user, it is desirable to make a conservative recommendation based upon the

patch ratings as well as to show the latest version on the chain. But some external users may ask to receive, in addition, a less conservative but more current recommendation.

As another illustrative example, another class of somewhat more tested and reliable patches with a visibility of "Limited" might be "visible" to field engineers and enterprise managers, as well as to inside technical specialists, all of whom have sufficient technical expertise to understand the risks that can arise from installing a patch that has been tested to some degree but not sufficiently for general release. Such a patch would be made "invisible" to general computer "users" who have no significant technical skills. Such "users" would be able to find patches having a visibility of "All."

Applicant hopes that this explanation will satisfy the Examiner that the terms "limited" and "all" are not indefinite when considered the context of the invention disclosure.

c. "highly reliable" unclear

The Examiner indicates that the claims 3 and 17 recite the limitation "highly reliable." The Examiner says it is unclear as to how much reliable is the reliability "highly reliable?" Reconsideration of this objection is respectfully requested in view of the following explanation:

The phrase "highly reliable" in claims 3 and 7 is simply part of a statement indicating that some users need to obtain the most highly reliable patches that are available. For example, a user whose computers monitoring a critical industrial process would want to receive the most reliable patches available. The present invention treats such users differently than it treats, for example, a young hacker working on an isolated home computer and who wants the "latest" patch (presumably having the "latest and greatest" features) and who is not at all concerned about patch reliability.

In the case of a user who needs to obtain "highly reliable" patches, claims 3 and 17 require the search for patches to be conducted in a certain way. First, as is stated in independent claims 1 and 15, such a user locates a patch having some special quality that the user desires to have – it "corrects a particular defect" or it "has a particular property" or "both." Once such a patch is found, the patch tree containing that patch is found, and the

patch tree is scanned in the direction of more recently-released patches looking for better choices for the user to consider. But if the user needs to obtain “highly reliable” patches (as contrasted with the hacker, who simply wants the “newest” available patch, regardless of its reliability), claims 3 and 17 require that the patch “closest to the root of the patch tree” (meaning the newest patch) be selected and offered to the user, but only if this patch has “the same or greater reliability” as the patch located by the user initially. In other words, claims 3 and 17 refuse to show a user who needs “highly reliable” patches any new patch that is less reliable than the older patch that the user initially found. Applicant submits that the meaning of these two claims is clear and precise as they are presently worded.

As an example of the use of claims 3 and 17, Figure 18, at 1720, shows patches set forth in three vertical columns. The two patches shown in the leftmost column are patches selected by a user because they each “correct a particular defect” or it “have a particular property” or “both.” The computer then traces through the patch trees of these two patches, examining patches created more recently, and places in the middle vertical column the name of the most current patch that is as reliable as or more reliable than the patch in the left-hand column. The computer places into the right-most column the name of the most current patch that is reasonably reliable, even if it is not as reliable as the patch in the left-most column. Claims 3 and 17 are directed to the process for selecting the patches whose names are placed in the middle vertical column at 1720 in Figure 18.

As to the reliability of a patch, the specification actually teaches that each patch is to be assigned a reliability rating that can range from 1 to 3:

[0007] Figs. 4 and 15 also illustrate a number in parenthesis opposite the name of each patch. This number indicates the reliability of each patch. A rating of “1” indicates that a patch is new and has undergone little testing. A rating of “2” indicates that the patch has been available for use for some limited amount of time and has been installed on at least some minimal number of systems. A rating of “3” indicates that the patch has undergone some system testing. Clearly, a higher rated patch corresponds to a more tested patch and therefore a more reliable patch.

d. “acceptable reliability” unclear

The Examiner indicates that the claims 4 and 18 recite the limitation “acceptable reliability.” The Examiner says it is unclear as to how much reliable is the reliability “acceptable.” Reconsideration of this objection is respectfully requested in view of the following explanation:

Applicant first refers back to the description just presented of the table 1720 presented above. The “acceptably reliable” patch is the patch whose name appears in the right-most column, which is labeled: “Last Visible Available Good,” meaning this patch is the most recent patch that is “visible” and “available” to this particular user and that is also a “Good” patch, meaning one having a reasonable degree of reliability. Referring to claim 4, the claim requires the display of two patches: the “patch found,” which is a reference back to claim 1 where the user found a patch that “corrects a particular defect” or “has a particular property” or “both.” In the table 1720 of Figure 18, this “patch found” by the user is listed in the left-most column. The “acceptably reliable” patch is then listed in the third column and is the newest patch (the patch “closest to the root of the patch tree,” as it says in claim 4) whose reliability rating is “acceptable,” meaning a rating of 2 or more. Its rating may be lower than the reliability rating of the patch in the left-hand column, but this user is willing to take the risk of using such a patch.

In view of this explanation, the language of claims 4 and 18 is believed to be clear and precise, and allowance of these two claims is respectfully requested.

2. Lack of an Antecedent Basis

a. “the patch tree”

Applicant thanks the Examiner for having noticed that some claims refer to “patch trees” while other claims refer to “patch chains.” The phrases “patch tree” and “patch chain” are used interchangeably by the applicants in ordinary discourse. The parent application used the phrase “patch tree,” while the new matter and the new claims in this continuation-in-part application sometimes use the alternate phrase “patch chain.”

Accordingly, applicants have amended both the specification and the claims so that the phrase “patch chain” is everywhere replaced with the phrase “patch tree,” which makes

the most sense when one speaks of the "root" of the "patch tree." Applicant respectfully requests the Examiner's approval of this amendment to the specification and the claims.

C. Rejection of Claims 15-28 Based Upon 35 U.S.C. §101

In response to this rejection, applicants have amended independent claim 15 so that it now begins as follows:

15. (Currently amended) A computer-implemented patch selection system for aiding in the selection of program patches for installation into computer systems, where the patches are organized into patch trees ~~chains~~ each having a root, the system comprising:

Applicant submits that this is a sufficient change to overcome the Examiner's rejection, which is grounded in the *Warmerdam* case.

In *Warmerdam*, 33 F.3d 1354 at 1361 (CAFC 1994), the Court found the invention to be unpatentable as defined by method claim 1, but found "machine" claim 4, which depended upon claim 1, to be patentable. Following the appeal, *Warmerdam* simply cancelled claim 4 and then amended just the preamble of claim 1 in the very minor way indicated below, and then his patent issued:

1. A machine having a memory which contains method for generating a data structure which represents the shape of a physical object in a position and/or motion control machine as a hierarchy of bubbles[[,]] generated by a method comprising the steps of:

first locating the medial axis of the object and
then creating a hierarchy of bubbles on the medial axis.

(U.S. Patent No. 6,089,742 issued to Thomas P. H. Warmerdam on Nov. 1, 1989)

Accordingly, all that is needed to overcome the Examiner's *Warmerdam* Section 101 rejection is a simple recital of sufficient "computer" elements in the claim's preamble to limit the invention's applicability to use in a computer. The present applicants have done the same by including, in the preamble of independent claim 15, the limitation "A computer-

implemented patch selection system.” Applicants submit that claims 15-28 are now allowable under the law as defined in the *Warmerdam* decision.

D. Rejection of Claims 1-4 and 15-18 Based Upon 35 U.S.C. §102(a) In View of Admitted Prior Art Disclosed in Figure 15

The Examiner has rejected the claims 1-4 and 15-18 as unpatentable over the “admitted prior art” presented in Figures 2-4 and 15 as well as in pages 1-4 of applicant’s background of the invention.

Applicant respectfully requests reconsideration of this grounds for rejection and allowance of these claims, as well as claims 5-14 and 19-28 which are dependent upon some of claims 1-4 and 15-18 for the reasons presented below.

First of all, applicants deny that Figures 2-4 and 15 constitute “prior art.” Considering the figures one-at-a-time:

Figure 2 presents a representative database that identifies what file sets and which patches are installed upon several computer systems. This is information that is maintained on every Hewlett-Packard Co. computer and that may be readily extracted to aid in computer maintenance. But this is not information that can help one to use a computer to select patches for installation on a computer system. By itself, Figure 2 does not anticipate either independent claim 1 nor independent claim 15.

Figure 3 presents a representative patches database containing patch names, the names of file sets that are to be patched, and the names of the specific files within each file set that the named patch replaces when it is installed on a computer system. This information can be derived from the files that constitute any Hewlett-Packard Co. patch. But this is not information that can help one to use a computer to select patches for installation on a computer system. Accordingly, Figures 2 and 3 taken together do not anticipate either independent claim 1 or independent claim 15.

Figure 4 presents a representative patch tree database, where all the patches that may be used to patch a given one or more file sets are linked together in creation date order. This patch tree database can be used by a computer-implemented patch selection system, but the patch tree database, by itself, does not teach one how to go about selecting an optimized set of patches for installation on a computer system.

And finally, Figure 15 is simply another representative patch tree database no different from that shown in Figure 4. It also does not teach one how to go about selecting an optimized set of patches for installation on a computer system.

The background section of the specification, in paragraphs [0003] through [0005], does nothing but introduce the topic of program patching, explaining how patches are designed and how they are installed. The paragraph [0006] presents a description of a representative patch tree database, which is simply a data structure that organizes related patches in time order. The paragraph [0007] indicates that each patch can be assigned a quality rating depending upon how many computers it has been installed upon and how thoroughly it has been tested.

Finally, after the presentation of all of that introductory material which simply explains what program patches are, the single paragraph [0008] describes the “prior art” as installing the “newest” patches, regardless of their reliability and other factors, which is clearly not the technique defined by independent claims 1 and 15.

A final paragraph [0009] then lists several objects of the present invention, as has been customary in patents for many years. This paragraph cannot possibly be held to be part of the “prior art,” since that would go against all tradition in the field of patent law.

Accordingly, none of the material cited by the Examiner is “prior art” which anticipates the present invention as claimed in independent claims 1 and 15.

Now, with reference to the claims 1 and 15, the claims specifically require the user to find at least one “patch that corrects a particular defect or that has a particular property or both.” Next, a computer is used to locate that at least one patch on a patch chain. Next, the patch chain is scanned from the position of that at least one patch in a direction toward the

root of the patch tree (where the newest patch is positioned). Or, as the specification says quite clearly in paragraph [000104] (second sentence):

In this variation, *the patch chains are searched in the forward direction*, from a particular patch that is known to correct a particular defect or to introduce a particular property *forward through the patch tree to its root (from left to right in the figures*, rather than from right to left as taught above), checking each patch for its suitability for a particular user, given the degree of reliability that is indicated by the nature of the user's application. *[emphasis added]*

Where, in Figures 2, 3, 4, and 15 and in introductory paragraphs [0002] to [0009] does the Examiner find it taught that a computerized search of a patch tree is to be conducted from a known patch towards the root of the patch tree? Nowhere – that requirement of all the claims cannot be found in those figures or in those paragraphs. Even the entire specification of the parent of the present application does not teach this – the parent application teaches searching in the other direction, from the root of the patch tree towards its leaves. This is an entirely new approach to locating patches introduced in this continuation-in-part patent application.

On this basis alone, applicant submits that independent claims 1 and 15, and all the dependent claims 2-14 and 16-28 that incorporate the limitations of claims 1 or 15 by reference, are not anticipated by the teachings of the present patent application.

Claims 1 and 15 additionally require that any patches presented must “satisfy one or more specified conditions *determined by the nature of each patch and by the identity of the patch recipient.*” (*emphasis added*) Nowhere in Figures 2-4 and 15 and in paragraphs [0002] to [0009] can this specific teaching be found. Once again, the idea that the identity of the patch recipient will affect which patches are retrieved in an automated fashion for that recipient is a new idea. Dependent claim 2 says the reliability of a presented patch must be “adequate to the requirements or attributes” of “a given patch recipient.” Claim 3, which depends upon claim 2, goes on to say more specifically that a recipient “in need of highly reliable patches” must be presented with a patch “having the same or greater reliability” than the patch searched for and found initially by the recipient. Claim 4, which also depends upon claim 2, goes on in a different direction to say that a recipient “in need of patches having

acceptable reliability” may be presented with a patch “closest to the root of the patch tree” and “having acceptable reliability.” And so on.

Applicant submits that all of these claims are fully patentable, and their allowance is respectfully requested.

E. Rejection of Claims 5-14 and 19-28 Based Upon 35 U.S.C. §103 In View of Admitted Prior Art Disclosed in Figure 15 and U.S. Patent No. 5,809,230 (Pereira)

The Examiner’s rejection under Section 103 must fall because all of the claims 5-14 and 19-28 are dependent upon, and incorporate by reference, either independent claim 1 or independent claim 15, both of which are allowable. And as a matter of law, dependent claims which depend upon allowed claims are also allowable.

F. Conclusion

Applicants believe that the present application, as amended, is now in condition for allowance. Early and favorable reconsideration and allowance of this application, as amended, is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1450. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1450. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1450.

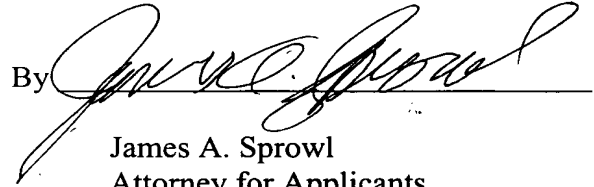
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